AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §1251 et seq.; the "CWA"),

Bridgewater Power Company

is authorized to discharge from a facility located at

Route 3
Bridgewater, NH 03222

to receiving water named

Pemigewasset River (Hydrologic Basin Code 01070001)

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

* This permit shall become effective thirty (30) days from the date of issuance.

This permit and the authorization to discharge expire at midnight, five years from the date of issuance.

This permit supersedes the permit issued on September 15, 2000.

This permit consists of 9 pages in Part I including Effluent Limitations and Monitoring Requirements, Reporting Requirements, and State Permit Conditions; Attachment A (8 pages); Attachment B (14 pages) and Part II including General Conditions and Definitions.

Signed this day of , 2006

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Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency
Region I - New England
Boston, Massachusetts

* If comments are received in response to the Draft Permit, the effective date will be sixty (60) days from the date of issuance.

PART I.A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The term "Regional Administrator" means the Regional Administrator of Region I of the U.S. Environmental Protection Agency and the term "Commissioner" means the Commissioner of the New Hampshire Department of Environmental Services, Water Division (NHDES-WD) or their respective designee.

2. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial number 001A (process): boiler blowdown; floor drains (misc. losses and pump gland leakage); mechanical equipment cooling; condenser cooling; and generator cooling waters to the Pemigewasset River only during emergencies, to perform maintenance on the pond liner, and when needed to adjust the concentration of chemicals in the cooling water. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (million gallons per day)	0.072	0.5	Continuous	Recorder
Total Suspended Solids (mg/l)	30	100	1/Week	Composite
Temperature (^{o}F)	---	95	Continuous	Recorder
Oil and Grease (mg/l)	15	20	1/Week	Grab
Total Recoverable Copper (mg/l)	0.52	0.52	2/Month	Grab
Total Recoverable Lead (mg/l)	0.21	0.79	2/Month	Grab
Total Recoverable Iron (mg/l)	---	1.0	2/Month	Grab
Total Residual Chlorine (mg/l)	---	0.2	1/Day	Grab
pH (standard units)	$\geq$6.5 and $\leq$8.0		Continuous	Recorder
Whole Effluent Toxicity				
LC50 (%)	---	$\geq$50	2/Year	Grab
A-NOEC (%)	---	Report	2/Year	Grab
Ammonia Nitrogen as Nitrogen (mg/l)	---	Report	2/Year	Grab
Hardness (mg/l)	---	Report	2/Year	Grab
Total Recoverable Aluminum (mg/l)	---	Report	2/Year	Grab
Total Recoverable Cadmium (mg/l)	---	Report	2/Year	Grab
Total Recoverable Chromium (mg/l)	---	Report	2/Year	Grab
Total Recoverable Copper (mg/l)	---	Report	2/Year	Grab
Total Recoverable Lead (mg/l)	---	Report	2/Year	Grab
Total Recoverable Nickel (mg/l)	---	Report	2/Year	Grab
Total Recoverable Zinc (mg/l)	---	Report	2/Year	Grab

a. Effluent samples shall be taken from the suction side of the circulating water pump, prior to discharging into the Pemigewasset River and without mixing with storm water. At no time shall the discharge flow rate exceed 448 gallons per minute. The permittee shall notify EPA and NHDES-WD within 24 hours by telephone after initiating discharge from this location.

b. The permittee shall conduct temperature monitoring during each discharge event to characterize the thermal plume in the Pemigewasset River. Temperature readings shall be taken at varying depths and locations upstream, downstream, and across the river from the discharge location. Study results shall be submitted to EPA and the NHDES-WD within 90 days of the discharge.

c. LC50 (Lethal Concentration 50 Percent) is the concentration of wastewater (effluent) causing mortality to 50 percent (%) of the test organisms. The "50 % or greater limit" is defined as a sample which is composed of 50 % or greater effluent, the remainder being dilution water. The limit is considered to be a maximum daily limit.

d. The permittee shall conduct 48-Hour Static Acute Whole Effluent Toxicity (WET) test on effluent samples using two species, Daphnid (Ceriodaphnia dubia) and Fathead Minnow (Pimephales promelas) following the protocol in Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol dated December 1995). Toxicity test samples shall be collected and tests completed during the calendar quarters ending June 30th and September 30th each year. Toxicity test results are to be submitted by the 15th day of the month following the end of the quarter sampled.

e. A-NOEC (Acute-No Observed Effect Concentration) is defined as the highest concentration of toxicant or effluent to which organisms are exposed in a life-cycle or partial life-cycle test which causes no adverse effects (in this case, death) at a specific time of observation as determined from hypothesis testing where the test results (again, death) exhibit a linear dose-response relationship. However, where the test results do not exhibit a linear dose-response relationship, report the lowest concentration where there is no observable effect. See Attachment A, page A-8 (VII. Toxicity Test Data Analysis) for additional clarification.

f. For each WET test the permittee shall report on the appropriate Discharge Monitoring Report (DMR), the concentrations of the Ammonia Nitrogen as Nitrogen, Hardness, and Total Recoverable Aluminum, Cadmium, Chromium, Copper, Lead, Nickel and Zinc found in the 100 percent effluent sample. All these aforementioned chemical parameters shall be determined to at least the Minimum Quantification Level (MLs) shown in Attachment A, page A-7, or as amended. Also the permittee should note that all chemical parameter results must still be reported in the appropriate toxicity report. The permittee may use results from the WET test's chemical analysis for Total Recoverable Copper, Lead and Zinc in partial fulfillment

of these limited/monitored constituents.

3. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall serial numbers 001C and 002: storm water runoff to the Pemigewasset River. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow Rate (million gallons per day)	---	Report	1/Quarter	Estimate
Oil and Grease (mg/l)	---	15	1/Quarter	Grab
Total Suspended Solids (mg/l)	--	Report	1/Quarter	Grab
Chemical Oxygen Demand (mg/l)	---	Report	1/Quarter	Grab
pH (standard units)	≥6.5 and ≤8.0		1/Quarter	Grab
pH (standard units) of rainfall	---	Report	1/Quarter	Grab

a. Effluent samples shall be taken from either the entrance or the exit of the catch basin discharge pipe (depending on safety conditions), prior to discharging into the Pemigewasset River.

b. At each outfall, grab samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The grab samples shall be taken during the first thirty minutes of the discharge. If collection of the grab sample(s) during the first thirty minutes is impracticable, grab sample(s) can be taken as soon after that as possible, and the permittee shall submit with the monitoring report a description of why the collection of the grab sample(s) during the first thirty minutes was impracticable. When a permittee is unable to collect grab sample(s) due to adverse climatic conditions, the permittee must submit in lieu of sampling data a description of why the grab sample(s) could not be collected, including available documentation of the event. Adverse weather conditions which may prohibit the collection of sample(s) include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricane, tornadoes, electrical storms, etc.) or otherwise make the collection of sample(s) impracticable (drought, extended frozen conditions, specified storm event did not occur during sampling period, etc.). A "no discharge" report shall be submitted for those quarters in which

there is no discharge.

c. The pH shall not be less than 6.5 S.U. nor greater than 8.0 S.U. unless due to naturally occurring conditions in the rainfall. The pH shall be within 0.5 S.U. of the rainfall pH when the pH is outside the above range. Rainfall pH shall be monitored when the discharge is monitored and shall be reported on the appropriate Discharge Monitoring Report.

4. Water Treatment Chemicals

a. The permittee may propose to conduct feasibility studies involving new chemicals not currently approved for water discharge. The permittee shall gain approval from the Regional Administrator and the Commissioner before any such studies take place. A report summarizing the results of any such studies shall be submitted to the Regional Administrator and the Commissioner regarding discharge frequency, concentration, and the impact, if any, on the indigenous populations of the receiving water. The Regional Administrator or the Commissioner may require, among other parameters, Whole Effluent Toxicity testing as part of feasibility studies.

b. Every July the permittee must collect a representative sample of water from the cooling pond and perform on that sample a: (1) priority pollutant scan for all the pollutants shown in 40 CFR Part 423, Appendix A; and (2) 48-Hour static acute WET test using two species, Daphnid (Ceriodaphnia dubia) and the Fathead Minnow (Pimephales promelas) following the protocol shown in Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol dated December 1995). Results from all the above tests shall be submitted with the DMRs for August due to EPA and the NHDES-WD by September 15th. For each priority pollutant, their respective concentrations shall be reported, and for each species of the WET test, the A-NOEC and LC50 values shall be reported.

5. Storm Water Pollution Prevention Plan (SWPPP)

a. The permittee shall continue to implement its SWPPP. Review and updating the SWPPP shall be done at least annually. Except as provided elsewhere in this permit, the SWPPP for this facility shall provide for compliance with the terms of the permit and the plan. The SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from this facility. In addition, the SWPPP shall describe and ensure the implementation of practices to reduce the pollutants in storm water discharges associated with industrial activity and to assure compliance with the terms and conditions of this permit. Attachment B provides the minimum requirements that must be addressed in the SWPPP for this facility.

b. Within sixty (60) days of the effective date of this permit, the permittee shall submit to

EPA and NHDES-WD a copy of its updated SWPPP.

6. Water Quality Requirements

   a. Discharges shall not either cause a violation of the water quality standards or jeopardize any Class B use of the Pemigewasset River.

   b. The thermal plumes from the station shall: (a) not block zones of fish passage, (b) not interfere with spawning of indigenous populations, (c) not change the balanced indigenous population of the receiving water, and (d) have minimal contact with surrounding shorelines.

   c. Pollutants which are not limited by the permit, but have been specifically disclosed in the last permit application, may be discharged at the frequency and level disclosed in the application, provided that such discharge does not violate sections 307 and 311 of the Act or applicable water quality standards.

   d. Discharges to the Pemigewasset River shall be adequately treated to insure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. They shall be adequately treated to insure that the surface waters remain free from pollutants which produce odor, color, taste, or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

   e. The effluent shall not contain metals and/or materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving waters.

7. Except as specified in Parts I.A.2 through I.A.3 herein the permittee shall not discharge to the Pemigewasset River a final effluent to which it has added any pollutants.

   a. There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid. The permittee shall dispose of all known PCB equipment, articles, and wastes in accordance with 40 CFR 761. The permittee shall submit to EPA and NHDES-WD a certification that this disposal has been accomplished within thirty (30) days of such disposal.

   b. Chlorine only may be used as a biocide. No other biocide shall be used without explicit approval from EPA and the Commissioner.

   c. There will be no discharge as a result of metal cleaning wastes, including washing of condensers, air preheaters, or other types of process equipment. Copies of manifests for the removal of all metal cleaning wastes, for the past five years, shall be submitted

to the EPA and NHDES-WD within thirty (30) days of the effective date of this permit.

d. Wood chips, sawdust, waste ash, and other wood related debris shall not enter the Pemigewasset River from any runoff area. All these materials shall be prevented from entering catch basins that drain water from the solids collection channels to storm water outfalls. These solids collection channels shall be inspected at least quarterly for compliance with this provision and, if necessary, cleaned. All debris removed from treatment channels shall be disposed of according to applicable State and Federal regulations.

e. The permittee shall comply with all existing federal, state, and local laws and regulations that apply to the reuse or disposal of solids, such as those which may be removed from the cooling pond. At no time shall these solids be discharged to the Pemigewasset River.

f. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Administrator as soon as they know or have reason to believe (40 CFR §122.42):

i. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) One hundred micrograms per liter (100 ug/l);

(2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

(4) Any other notification level established by the Regional Administrator in accordance with 40 CFR §122.44(f).

ii. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

(1) Five hundred micrograms per liter (500 ug/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

(4) Any other notification level established by the Regional Administrator in accordance with 40 CFR §122.44(f).

8. Possible Permit Requirement Changes

a. Storm Water Monitoring Requirements

Bridgewater Power Company may opt out of storm water requirements by certifying "no exposure" using Form 3510-11, 40 CFR Section 122.26(g) as published in Federal Register, Vol. 64., No. 235, Wednesday, December 8, 1999. Storm water requirements in this permit are defined as the Storm Water Pollution Prevention Plan (SWPPP) in Part I.A.5 (page 5) and the Effluent Limitations and Monitoring Requirements in Part I.A.3 (page 4) for Outfalls 001C and 002. To apply for the elimination of these requirements, the permittee must submit the following written documentation: (1) completed Form 3510-11 to EPA-Headquarters (EPA-HQ) (see instructions on form) with a copy to EPA-New England; and (2) a letter from the NHDES-WD (containing original signature) confirming "no exposure" to EPA-New England. The permittee is required to meet all conditions in Parts I.A.5. and I.A.3 of this permit until the permittee receives the following documentation: (1) written notice (by certified mail) from EPA-New England indicating agreement with the "no exposure" assertion and including termination of all conditions in Parts I.A.5. and I.A.3. and (2) documentation from EPA-HQ.

b. pH Limit Adjustment

The permittee may submit a written request to the EPA requesting a change in the permitted pH limit range to be not less restrictive than 6.0 to 9.0 S.U. found in the National Effluent Limitation Guideline (Steam Electric Power Generating Point Source Category in 40 CFR Section 423) for this facility's process wastewater flow. The permittee's written request must include the State's letter containing an original signature (no copies). The State's letter shall state that the permittee has demonstrated to the State's satisfaction that as long as discharges to the receiving water from a specific outfall are within a specific numeric pH range, the naturally occurring receiving water pH will be unaltered. That letter must specify for each outfall the associated numeric pH limit range. Until written notice is received by certified mail from the EPA indicating the pH limit range has been changed, the permittee is required to meet the permitted pH limit range in the respective permit.

c. Whole Effluent Toxicity Test Frequency Adjustment

The permittee may submit a written request to the EPA-New England requesting a reduction in the frequency (to not less than once per year) of required toxicity testing, after completion of a minimum of the most recent four (4) successive toxicity tests of effluent, all of which must be valid tests and must demonstrate compliance with the permit limits for whole effluent toxicity. Until written notice is received by certified mail from the EPA indicating that the Whole Effluent Testing requirement has been changed, the permittee is required to continue testing at the frequency specified in the respective permit.

9. This permit shall be modified, or alternatively, revoked and reissued to comply with any applicable standard or limitation promulgated or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

(1) contains different conditions or is otherwise more stringent than any effluent limitation in this permit; or

(2) controls any pollutant not limited by this permit.

10. This permit may be modified, or alternatively, revoked and reissued to incorporate additional testing requirements, including chemical specific limits, on Outfalls 001A, 001C, 002A and on water in the cooling pond, if any testing result indicates that the discharge causes or has reasonable potential to cause or contribute to an exceedance of any State water quality criterion. Results of the analyses required by this Permit are considered "New Information" and the Permit may be modified as provided in 40 CFR Section 122.62(a)(2).

PART I.B. MONITORING AND REPORTING

Monitoring results shall be summarized for each calendar month and reported on separate Discharge Monitoring Report Form(s) (DMRs) postmarked no later than the 15th day of the month following the completed reporting period. The permittee shall provide written explanations of all violations in DMR cover letters.

Bridgewater Power Company may assert a business confidentiality claim with respect to part or all of the information submitted to EPA in the manner described at 40 CFR Part 2.203(b). Information covered by such a claim will be disclosed by EPA only to the extent, and by means, of the procedures set forth in 40 CFR Part 2, Subpart B. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to Bridgewater Power Company. Effluent information shall not be regarded as confidential.

Signed and dated originals of the DMRs, and all other reports required herein, shall be submitted to the Director at the following addresses:

U.S. Environmental Protection Agency
Water Technical Unit (SEW)
P.O. Box 8127
Boston, Massachusetts 02114-8127

In addition, duplicate signed copies of all DMRs and all other notifications and reports required by this permit shall be submitted to the State at:

New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
6 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

PART I.C. STATE PERMIT CONDITIONS

The permittee shall comply with the following conditions which are included as State Certification requirements.

The pH range of 6.5-8.0 S.U. must be achieved in the final effluent unless the permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water, or (2) that the naturally occurring source water pH is unaltered by the permittee's operations. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits less restrictive than applicable federal effluent limitation guideline(s) published in the CFRs.

This NPDES Discharge Permit is issued by the U.S. Environmental Protection Agency under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this Permit. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action, and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.